TECHNICAL REVIEW AND EVALUATION OF APPLICATION FOR AIR QUALITY PERMIT NO. 1000046

I. INTRODUCTION

Phelps Dodge operates a primary copper smelter in Miami, AZ. Several other activities such as the copper concentrate handling, bedding plant, electrolytic refinery, and rod plant are also carried out at this location.

A. Company Information

Facility Name:	Phelps Dodge Miami, Inc.
Mailing Address:	P.O. Box 4444, Claypool, AZ
Facility Address:	Hwy 60, North of Miami, Miami, Gila County, AZ

B. Attainment Classification

The Miami area has been designated as non-attainment for Particulate Matter < 10 micron aerodynamic diameter (PM10), Total Suspended Particulate Matter (TSP), and Sulfur Dioxide (SO_2).

II. PROCESS DESCRIPTION

Please refer Title V Permit application.

III. EMISSIONS

The Phelps Dodge Miami Smelter has the potential to emit greater than 100 tons per year of PM, SO_2, Nitrogen Oxides (NO_x), and Carbon Monoxide (CO), and Lead. It is a "major" source pursuant to Sec 501(2) of the Clean Air Act.

IV. COMPLIANCE HISTORY

A. Inspections

Inspection Date (Number)	Type of Inspection	Results
5/18/92 (CU:9247)	Announced Inspection	No NOV

Inspection Date (Number)	Type of Inspection	Results
10/28/92 (CU:9778)	Unannounced Inspection	NOV Recommended for Opacity Exceedance from Acid Plant Tailstack (37%)
11/8/92 (CU:9853)	Performance test	No NOV
3/23/93 (CU:10001)	Unannounced Inspection	No NOV
5/18/93 (CU:10114)	Unannounced Inspection	NOV Recommended for Vent Fume Stack Opacity Exceedance (62.5%)
6/28/93 (CU:10228)	Unannounced Inspection	NOV Recommended for Vent Fume Stack Opacity Exceedance (57%)
7/27/93 (CU:10308)	Unannounced Inspection	NOV Recommended for Vent Fume Stack Opacity Exceedance (75.2%)
2/1/94 (CU:10645)	Unannounced Inspection	No violations
5/12/94 (CU:10830)	Unannounced Inspection	No violations
2/7/95 (12273)	Unannounced Inspection	NOV Recommended for Opacity > 40 % for a plume resulting from open burning. NOV #AQD:CS:12308 issued, Permittee submitted compliance scheme, and NOV closed on 8/23/95
9/13/95 (13729)	RATA on SO_2 CEMs	No NOV
3/19/96 (15001)	Level 3 / Performance Test	No NOV
6/20/96 (15597)	Level Two / Unannounced Inspection	No NOV
12/12/96 (16540)	Level One / Unannounced Inspection	No NOV
4/16/97 (17284)	Level One / Performance Test	No NOV
7/8/97 (17750)	Level One / Performance Test	No NOV
12/2/97 (18604)	Level One / Performance Test	No NOV
2/20/98 (19090)	Level One / Performance Test	No NOV
4/20/98 (19310)	Level One / Performance Test	No NOV
4/23/98 (19312)	Level One / Performance Test	No NOV
6/24/98 (19659)	Level One /Performance Test	No NOV

Inspection Date (Number)	Type of Inspection	Results
9/24/98 (20324)	Level 2 (Periodic Inspection)	No NOV
12/8/98 (20894)	Level 1 (Performance test)	No NOV
2/18/99 (21326)	Level 2 (Surveillance)	No NOV
4/20/99 (21603)	Level 1 (Performance test)	No NOV
5/4/99 (21725)	Level 2 (Periodic Inspection)	No NOV
10/24/99 (22951)	Level 1 (Performance test)	No NOV
3/20/2000 (23759)	Level 2 (Periodic)	No NOV
5/15/2000 (24048)	Level 1 (Performance test)	No NOV
8/31/2000 (24742)	Level 1 (Surveillance)	NOV- opacity from vent fume stack
10/24/2000 (25018)	Level 1 (Performance test)	No NOV
11/3/2000 (25047)	Level 2 (Periodic)	No NOV
12/6/2000 (25215)	Level 2	No NOV
1/3/2001 (25317)	Level 1 (Performance test)	No NOV
4/23/2001 (25775)	Level 1 (Performance test)	No NOV
9/5/2001 (26329)	Level 2	No NOV

V. APPLICABLE REGULATIONS VERIFICATION

The Permittee has identified the applicable regulations that apply to each unit in the permit application. The following table summarizes the findings of the Department with respect to applicability or non-applicability of applicable regulations that apply to each unit. Installation Permit and other previous permit conditions are discussed under Section VII of this technical review document.

Applicable regulations verification

Unit ID	Control Equipment	Applicable Regulations	Verification
Material Handling and Bedding Plant	1. Dedicated baghouses for individual storage bins 2. Water sprays	*R18-2-604.A* *R18-2-604.B* *R18-2-606* *R18-2-607* *R18-2-610* *R18-2-702.B* Installation Permit #1232 limits on 2 concentrate bin vents, revert bin, coal bin, and flux bin at 0.32 tpy each.	Point source opacity standard from R18-2-702.B apply to the baghouses. All non point sources shall be regulated by Article 6 of the State regulations
Process Gases from the IsaSmelt Furnace / Converter [Acid Plant Tail Gas Stack]	Acid Plant (SO_2) Chemical Scrubber * (SO_2)	**40 CFR 60.163(a)** *SO_2 <=650 ppm* **40 CFR 60.164(b)** *Opacity <= 20 %* **40 CFR 52.126(b)(1)** *Particulate matter std* **R18-2-715.F.4** *SO_2 MPR* **IP 1232/1232R1** *SO_2 < = 3515 tpy* *PM < = 87.67 tpy* *Pb <= 0.44 tpy* *NMBM Feed-rate of 850,000 tpy* **1000266** *NO_x <= 97 pph or 425 tpy*	The IsaSmelt furnace was installed in the early-90s. The Acid Plant accepts exhaust from both the IsaSmelt, and the Converters. The Converters were built prior to the NSPS trigger date, but since the Acid Plant accepts gas streams from both the furnace and the converters, the Acid Plant Tailgas Stack is subject to the NSPS 650 ppm limit for SO_2 and 20 % limit for opacity. In addition, the MPR rule is applicable to all stacks facility-wide. Therefore, the Acid Plant Tailgas Stack and the Vent Fume Stack are all subject to the MPR rule. When the IsaSmelt furnace was installed, an emissions "offsets" analysis was carried out to demonstrate that the increase in SO_2 and PM emissions from the change would be below "significance" levels, and therefore it would not be necessary to carry out a PSD review for these pollutants. The analysis resulted in the prescription of emission rate limits for these pollutants. The limit on the feedrate of NMBM is also a result of this analysis. A performance test on NOx emissions following installation of the IsaSmelt revealed that NOx emissions had increased by greater than a "significant" amount after the change. A PSD review was completed, and the NOx limits were added to the installation permit through significant revision number 1000266.

Unit ID	Control Equipment	Applicable Regulations	Verification
Vent Fume Stack	Chemical Scrubber (SO_2 and PM)	**40 CFR 52.126(b)(1)** *Particulate matter std* **R18-2-715(D)** *Opacity <= 20%* **R18-2-715.F.4** *SO_2 MPR* **IP 1232/1232R1** *SO_2 < = 1336 tpy* *PM < = 198.7 tpy* *Pb < = 105.3 tpy* *Compliance Plan Requirements*	The Vent Fume stack serves as the point of exhaust for fugitive emissions collected from the electric furnace, IsaSmelt furnace. The MPR rule is applicable to all stacks facility-wide. Therefore, the Acid Plant Tailgas Stack and the Vent Fume Stack are subject to the MPR rule. When the IsaSmelt furnace was installed, an emissions "offsets" analysis was carried out to demonstrate that the increase in SO_2 and PM emissions from the change would be below "significance" levels, and therefore it would not be necessary to carry out a PSD review for these pollutants. The analysis resulted in the prescription of emission rate limits for these pollutants. The limit on the feedrate of NMBM is also a result of this analysis. The permit will contain a compliance plan for addressing opacity problems associated with the vent fume stack. The compliance plan will contain an enforceable sequence of actions with milestones leading to final compliance with the 20% standard (see Section VI for more detail).
Smelter Fugitives		R18-2-702(B) Opacity < = 40% **IP 1232/1232R1** *SO_2 cap < =* *10368 tpy* *Pb < =44.45 tpy*	When the IsaSmelt furnace was installed, an emissions "offsets" analysis was carried out to demonstrate that the increase in SO_2emissions from the change would be below "significance" levels, and therefore it would not be necessary to carry out a PSD review. The analysis resulted in the setting of SO_2 emission limits.
Converter Preheaters		*R18-2-702* *R18-2-724(C)(1)* *R18-2-724(I)*	Fuel burning equipment subject to State rules
Change Room Heater		*R18-2-702* *R18-2-724(C)(1)* *R18-2-724(I)*	Fuel burning equipment subject to State rules
Isa Auxiliary Boiler		*40 CFR 60, Subpart Dc*	Fuel burning equipment subject to Subpart Dc of the NSPS
Isa Emergency Diesel Generator, Smelter Emergency Diesel Generator, Emergency Feedwater Pump Diesel Generator		*R18-2-702* *R18-2-719*	Stationary Rotating Machinery subject to State rules

Unit ID	Control Equipment	Applicable Regulations	Verification
Electrolytic Refinery Boilers (Gas & Oil Fired)		*40 CFR 60, Subpart Dc*	Fuel burning equipment subject to Subpart Dc of the NSPS
Thermal Breaker Heater		*R18-2-702* *R18-2-724(C)(1)* *R18-2-724(I)*	Fuel burning equipment subject to State rules
Acid Plant Preheater		*R18-2-702* *R18-2-724(C)(1)* *R18-2-724(I)*	Fuel burning equipment subject to State rules
Gasoline Storage Tanks		*R8-2-710 reporting rqmts.*	Standards of Performance for Existing Storage Vessels for Petroleum liquids
Diesel Fuel Storage Tanks		*R8-2-710 reporting rqmts.*	Standards of Performance for Existing Storage Vessels for Petroleum liquids
Anode Furnaces and Casting	Steam Injection System	*R18-2-702.B*	Opacity standard for process fugitives
Electrolytic refining Refining cell, Anode slime processing , and Rod Plant (incl shaft furnace)		*R18-2-730.D* *R18-2-730.F* *R18-2-730.G* *R18-2-702.B*	These units are not covered by any specific existing source standard. They are, hence, regulated as unclassified sources.
Non point sources: driveways, parking lots, and vacant lots, open area construction, reparation, earth excavation, roadway construction, repair or reconstruction, material transportation , material handling, storage piles, stacking and reclaiming machinery at storage piles, site and roadway cleaning.		*R18-2-604.A* *R18-2-604.B* *R18-2-605* *R18-2-606* *R18-2-607* *R18-2-608* *R18-2-610*	The regulations listed are applicable to non point sources.
Mobile Sources		ADEQ (A.A.C.) *R18-2-801* *R18-2-804*	These regulations are applicable to all mobile sources.

Unit ID	Control Equipment	Applicable Regulations	Verification
Other periodic activities (abrasive blasting, spray painting, renovation operations, air conditioner repairs...)		*R18-2-726 (sand blasting operations)* *R18-2-727 (spray painting operations)* *R18-2-1101.A.8 (NESHAPS for asbestos)* CFR's *40 CFR 82- Subpart F- Protection of Stratospheric ozone.*	Relevant requirements applicable to the periodic activities.
Miscellaneous storage tanks		*R18-2-730.D* *R18-2-730.F* *R18-2-730.G*	These units are not covered by any specific existing source standard. They are, hence, regulated as unclassified sources.
Ambient Monitors		ADEQ (A.A.C.) *R18-2-202.A* *R18-2-202.B* *R18-2-715.02.E* *R18-2-215.A* *R18-2-215.B* *R18-2-215.C* *R18-2-216.A* *R18-2-216.B* *R18-2-219.A* *R18-2-219.B* *R18-2-219.C.1* And other applicable requirements from prior permits	Ambient air quality standards and requirement to operate ambient monitors

* The caustic scrubber associated with the acid plant is not subject to the bypass provisions in A.A.C. R18-2-715.01.T.

VI. COMPLIANCE PLAN FOR VENT FUME STACK

A.A.C. R18-2-715.D requires that the opacity of emissions from the vent fume stack not exceed 20%. A.A.C. R18-2-702.D authorizes the Director to grant an adjusted, less stringent opacity standard if the rule criteria are satisfied. The Permittee has petitioned for an adjusted opacity standard for the vent fume stack and contends that it has made the demonstrations required under R18-2-702.D. ADEQ does not agree with PDMI's characterization of the status of the variance petition. The Permittee and the Director have developed the following compliance schedule in order to ensure compliance with A.A.C. R18-2-715.D.

March 15, 2002	Submit Report on Status of Evaluation of Control Options
July 15, 2002	Submit Report on Control Option Selected
December 15, 2002	Submit Permit Application
January 31, 2003	Complete Detailed Engineering
May 15, 2003	Commence Construction
April 15, 2004	Equipment Fully Operational
May 15, 2004	Schedule performance test to demonstrate compliance with 20% opacity limit

VII. PREVIOUS PERMITS AND CONDITIONS

A. Previous Permits

The following table lists all the permits that have been issued to the source thus far.

Previous permits

Date Permit Issued	Permit #	Application Basis
8/1/84	0310-84	Operating Permit
5/30/91	1232	Installation Permit
11/4/94	1232R1	Minor Revision to Installation Permit 1232
2/8/96	1000324	Minor Revision to Installation Permit 1232
4/17/96	1000208	Minor Revision to Installation Permit #1232
5/3/96	1000382	Administrative Amendment #1000382 to Installation Permit #1232
5/30/96	1000340	Significant Revision to Installation Permit #1232
12/24/97	1000266	Significant Revision to Installation Permit #1232
11/11/98	1000460	Minor Revision to Operating Permit #0310-84
4/14/2000	1001190	Minor revision to Installation Permit #1232
3/27/2000	1001248	Minor revision to Operating Permit #0310-84

B. Previous Permit Conditions

Operating Permit #0310-84

OP #0314-85, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att A.1			x		Requirement to comply with applicable air regulations will be captured in the Title V permit
Att A.2			x		Recordkeeping and reporting requirements will be structured appropriately in the Title V permit to track compliance with applicable requirements. Pursuant to Significant Revision #1000340, requirements relating to the Air Quality Maintenance System shall be deleted
Att A.3			x		Reporting requirements for excess emissions and emergencies will be outlined in the Title V permit
Att A.4	x				Requirement to operate the AQMS
Att A.5			x		Plant-wide emission limits, bypass requirements, and sulfur balance requirements will be outlined in the Title V permit
Att.A.6	x				Compliance schedule for installation associated with Installation Permit No. 1173
Att A.7			x		Particulate matter emissions limits and testing to be outlined in Title V permit
Att A.8			x		Requirements for operation of CEM's and QA/QC procedures
Att A.9			x		Permit revocation requirements
Att A.10			x		Permit violations and enforcement action
Att B	x				Air Quality Maintenance System requirements are obsolete. Have been deleted in Title V permit.

Installation Permit #1232- Installation of Isasmelt Furnace

IP #1232, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att B.I		x			Applicable requirements for the Isasmelt installation
Att B.II.A		x			Acid plant tail gas stack limit
Att B.II.B		x			State standard- Multi Point Rollback Rule
Att B.II.C			x		Opacity standards. 10% opacity standard applies only to process fugitives in a copper mining/milling facility.
Att B.II.D		x			Determination of fugitive sulfur dioxide emissions by use of a sulfur balance.
Att B.II.E			x		Maximum allowable emission rates for Sulfur dioxide, Particulates, Pb, As, Hg, Zn, Sb, Ba, Cd, Cr, Ag, Zn, Mn, Ni, and Se. Limits for Particulates, Lead, and Sulfur dioxide retained in Title V permit. Other heavy metal limits eliminated in permit revision subsequent to Permit #1232.
Att B. II.F			x		Excess emissions reporting for sulfur dioxide and lead
Att B.II.G	x				Excess emissions reporting for other trace metals. Trace metal emission study was a one-time requirement.
Att B.III			x		General stack sampling requirements- moved to Att A of Title V permit
Att B.IV			x		Testing requirements set in Title V permit to adequately track compliance with applicable requirements
Att B.V			x		Requirement to operate CEM's and perform QA/QC procedures
Att B.VI.A			x		Excess emissions reporting - in AttA of Title V permit

IP #1232, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att B.VI., B and C			x		Recordkeeping and reporting requirements set in Title V permit to adequately track compliance with applicable requirements
Att B.VII		x			Air Pollution Control Requirements
Att B.VIII.A		x			NMBM limit of 850,000 tons/year
Att B.VIII.B		x			Limitation of 25,000 dry tons of hazardous waste in feedstock
Att B.IX		x			Ambient monitors for PM-10
Att B.X	x				Trace metal study- requirement from installation permit #1232. Deleted by a subsequent permit revision

Minor Revision #1232R1 (Revision to Installation Permit #1232 to revise emission limits in Attachment C)

Permit #1232R1 References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
I				x	Revisions of maximum allowable emissions for lead and mercury and recognizing arsenic and mercury as hazardous air pollutants
II				x	Statement that other conditions from IP #1232 shall remain unchanged

Minor Revision #1000324 (Revision to Installation Permit #1232 to replace acid plant preheater)

Minor revision #1000324, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
II.G.1		x			Particulate matter emission limit from R18-2-724.
II.G.2		x			Limit on sulfur dioxide

Minor revision #1000324, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
II.G.3		x			Opacity standard
II.G.4		x			Limitation to burn only natural gas in the preheater

Minor Revision #1000208 (Revision to Installation Permit #1232 t o revise the tons per year amount of sulfur and trace elements in the recyclable hazardous waste feedstock)

Minor revision #1000208, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
I	x				Revises the ton per year amount of sulfur and trace elements in the recyclable wastes used as feed to the Isa smelt. (Revised subsequently by Administrative Amendment #1000382)

Administrative Amendment #1000382 to Installation Permit #1232

Administrative Amendment #1000208 References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att B.II		x			revises limits in Minor revision #1000208 to reflect that there will be only limits on trace metals in recyclable waste feedstock

Significant Revision #1000266 to Installation Permit #1232 (PSD permit for nitrogen oxides related to the Isasmelt Installation)

Significant revision #1000266, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att B.I		x			Applicable requirements

Significant revision #1000266, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att B.II.A		x			NO_X limit on the acid plant tailgas Testing and periodic monitoring/recordkeeping measures to show compliance with monthly and annual NO_X limits respectively
Att B.II.B		x			Hourly NO_X limit and limitation to burn only natural gas for the auxiliary boiler
Att B.II.C		x			Hourly NO_X limit, No.2 Diesel fuel usage limitation, and 500 hour/year operational limitation on the Isasmelt emergency genset
Att B.III		x			Limitation of 850, 000 tons per year of NMBM
Att B.IV		x			Recordkeeping requirements for daily, monthly, and year to date NMBM processed, monthly and year to date NO_X emissions from the acid plant tailgas, daily, monthly, and year to date hours of operation of the acid plant, monthly and year to date hours of operation of the emergency generator
Att B.V & VI		x			Semi annual testing requirements of the NO_X on the acid plant tail gas and reporting requirements

Minor Revision #1000460 to Operating Permit #0310-84

Minor revision #1000460, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
Att A.I		x			Clarification that the opacity limit for fugitive emissions from the smelter is 40%.

Significant Revision #1000340 to Installation Permit #1232 (revises installation permit requirements for ambient monitoring, metal emission guidelines and associated stack testing and sulfur balance methodology)

Significant revision #1000340, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
I.A		x			Revises PM-10/metals ambient monitoring requirements
I.B		x			Revises sulfur dioxide ambient monitoring requirements
II		x			Deletion of Interim guidelines, reporting/action level emission rates contained in Attachment C-2 Revised of Permit Revision #1232R1
III		x			Deletion of requirements in IP #1232 relating to stack testing of trace elements
IV		x			Deletion of references to Air Quality Maintenance Systems in Operating Permit #0310-84
V		x			Semi annual stack testing for PM and Lead on the Acid Plant and Vent fume stacks
VI		x			Estimation of fugitive sulfur dioxide emissions by the sulfur balance methodology

Minor Revision #1001190 to Installation Permit #1232 (revises limit of Arsenic content in the recyclable hazardous waste feedstream)

Minor revision #10001190, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
No number (revises Administrative Amendment #1000382, Condition II)		x			Revises As content of recyclable hazardous waste stream to be 10 tpy in the 365 day period following the issuance of this permit revision. At the end of the 365 day period, the Arsenic limit would revert back to being 5 tpy as noted in Ad Amendment #1000382

Minor revision #1001248 to Operating Permit #1001248 (revision to exempt the Acid Plant Inlet CEM from auditing and reporting requirements)

Minor revision #1001248, References	Determination				Remarks
	Delete	Keep	Revise	Streamline	
I		x			Condition clarifying that the CEMS to be used to demonstrate compliance with the multi point rollback rules would be the Acid Plant CEM, Vent Fume Stack CEM, and the 90 inch duct CEM
II		x			Requirement that the facility cannot operate on partial bypass during periods of acid plant shutdown

VIII. PERIODIC MONITORING REQUIREMENTS

A. Bi-weekly opacity monitoring (for non-NSPS scrubbers and baghouses)

The Permittee is required to establish a baseline opacity level at the exit of each air pollution control equipment under normal representative operating conditions. The Permittee is required to make a bi-weekly survey of the visible emissions from the emission units including fugitive emissions. The Permittee is required to create a record of the date on which the survey was taken, the name of the observer, and the results of the survey. If the visible emissions do not appear to exceed the baseline opacity level, the Permittee would note in the record that the visible emissions were below the baseline opacity, and it did not require a Method 9 to be performed.

If the Permittee finds that on an instantaneous basis the visible emissions are in

excess of the baseline opacity level but are below the opacity standard, then he is required to make a six-minute Method 9 observation. If this observation indicates opacity in excess of the baseline opacity level but is below the opacity standard then the Permittee is required to adjust or repair the controls or the equipment to bring the opacity to or below baseline level.

If the six-minute reading indicates that the opacity is above both the baseline level and the opacity standard then the Permittee is required to adjust the process equipment or process control equipment to bring the opacity below the baseline level. In addition, the Permittee shall report it as excess emissions. If the Permittee finds that the visible emissions are less than the baseline opacity, then the Permittee is required to record the source of emission, date, time, and result of the test.

The Permittee is required to adopt a similar approach with fugitive dust emissions. However, rather than establishing baseline opacity level for fugitive emissions the permittee is required to conduct a visual survey of visible emissions against the 40% opacity standard.

ADEQ believes that the bi-weekly visual survey approach identified in the preceding paragraphs reasonably assure compliance with the opacity and particulate matter standards. Although no data are available to directly correlate opacity to particulate matter emissions, doing so would at least indicate potential problems with the air pollution control device. If corrective actions are taken to rectify the problems associated with the pollution control device, then compliance can be inferred on the basis that the source operates its pollution control equipment in a manner consistent with good air pollution control practices. Opacity above the baseline level but less than 40% does not hold the source in violation of the particulate matter standard, but merely requires the source to identify and alleviate the problem by taking corrective actions to reduce the opacity to less than the baseline level. However, not taking corrective actions could potentially hold the source in violation of the permit terms.

Also, it shall be noted that all references to Method 9 observations shall be construed as meaning a six-minute observation and not a 3-hour performance test.

B. Non-Point Sources Monitoring

Non-point sources are subject to the 40% opacity standard and other Article 6 requirements. Periodic monitoring for opacity standard entails a bi-weekly visible emissions survey in accordance with an ADEQ-approved observation

plan, by a certified Method 9 observer. If the visible emissions survey indicates that a Method 9 reading may be required, the observer shall do so, and maintain records of the results. Any observed exceedance of the opacity standard should be reported appropriately.

C. Sulfur Dioxide Emissions Monitoring

The permit contains sulfur dioxide emission limitations which were accepted by PDMI in the past to net out of PSD review. The permit also contain emission limitations from A.A.C. R18-2-715 (Multi-Point Rollback Rule). The source will be demonstrating compliance with the limits for the point sources by using Continuous Emission Monitoring Systems (CEMS). The permit contains provisions for the source to conduct quality assurance procedures on the CEMS to ensure data quality and reliability. Fugitive emission from the facility will be tracked by using the monthly sulfur balance reports.

D. Fossil-fuel Fired Industrial and Commercial Equipment (non-NSPS fuel burning equipment subject to the state regulations under R18-2-724)

1. Particulate Matter

   Permittee is required to keep on record the lower heating value of the fuel being fired. This recordkeeping requirement will serve as the periodic monitoring for the particulate matter emission standard.

2. Sulfur Dioxide

   Permittee is required to keep on record the heating value, density, and sulfur content for the diesel fuel being fired. This recordkeeping requirement will serve as the periodic monitoring for the sulfur dioxide emission standard.

3. Opacity

   A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the stacks of the boilers. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The results of the Method 9 observation shall be maintained and excess emissions reported.

IX. INSIGNIFICANT ACTIVITIES

The applicant has requested the following activities to be deemed as "insignificant". According to A.A.C. R18-2-101.54, for an activity to be deemed "insignificant", there should be no applicable requirement for the activity. This was the basis used to determine if the activities in the following list qualify as an "insignificant" activity under Arizona law.

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
1	Gas turbines and stationary reciprocating internal combustion engines of not more than 325 aggregate brake horsepower	No	AACR18-2-719
2	Gas turbines and stationary reciprocating internal combustion engines that are emergency or standby units	No	AACR18-2-719
3	Each individual piece of fuel burning equipment, other than internal combustion engines, which is fired at a sustained rate of not more than 1000000 Btu per hour for anual 8 hour period or less	No	AACR18-2-724
4	Fuel combustion emission units and direct combustion units designed and used for comfort heating purposes or hot water used for personal hygiene	No	AACR18-2-724
5	Analytical and experimental laboratory equipment which is bench scale in nature including quality control/quality assurance laboratories supporting a smelting facility, and research and development laboratories	Yes	AACR18-2-101.57(j)
6	Small scale pilot scale research and development projects (on a case-by-case basis)	No	Contact ADEQ to ensure that permit not required, case-by-case
7	Lab equipment used for chemical and physical analysis	Yes	AACR18-2-101.57 (j)
8	Chemical Storage and Process Holding Tanks	No	Identify each tank
9	Storage of butane, propane, or liquified petroleum gas less than 100 gallons	Yes	AACR18-2-101.57(j)
10	Petroleum product storage tanks containing diesel and fuel oil (capacity < 40,000 gal), transformer oil, used oil, gasoline storage equipment (capacity < 10,000 gal)	Yes	AACR18-2-101.57 (b&c)
11	Piping and storage systems for natural gas, propane, and liquified petroleum gas	Yes	AACR18-2-101.57 (j)
12	Piping of fuel oils, used oil, and transformer oil	Yes	AACR18-2-101.57 (j)
13	Storage and handling of drums or other transportable containers where the containers are sealed during storage (includes containers of RCRA waste and used oil)	Yes	AACR18-2-101.57 (j)

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
14	Storage tanks of any size containing exclusively soaps, detergents, waxes, grease, aqueous salt solutions, aqueous acid solutions, or aqueous caustic solutions	Yes	AACR18-2-101.57 (j)
15	Acid loading and unloading	Yes	AACR18-2-101.57 (j)
16	Waste oil collection and recycling	Yes	AACR18-2-101.57 (j)
17	Water treatment or storage systems for boiler feedwater	Yes	AACR18-2-101.57 (j)
18	Water treatment or storage or cooling systems for process liquids and gases containing no chromium water treatment compounds	Yes	AACR18-2-101.57 (j)
19	Chemical storage associated with water and wastewater treatment where the water is treated for consumption and/or use within the permitted facility	Yes	AACR18-2-101.57 (j)
20	The collection, transmission, liquid treatment, and solids treatment processes at domestic type wastewater and sewage treatment works, or treatment facilities, including septic tank systems, which treat only domestic type wastewater and sewage	Yes	AACR18-2-101.57 (j)
21	Housekeeping activities and associated products used for cleaning purposes, including collecting spilled and accumulated materials at the source, including operations of fixed vacuum cleaning systems specifically for such purposes	Yes	AACR18-2-101.57 (j)
22	Air conditioning cooling, heating or ventilating equipment not designed to remove air contaminants generated by or released from associated or other equipment	No	Language unclear and broad. Need to have specific references
23	General office activities such as paper shredding, copying, photographic activities, and blueprinting.	Yes	AACR18-2-101.57 (j)
24	Rest room facilities and associated cleanup operations, and stacks or vents used to prevent the escape of sewer gas through plumbing traps	Yes	AACR18-2-101.57 (j)
25	Smoking rooms and areas	Yes	AACR18-2-101.57 (j)
26	Use of consumer products including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 USC 1261 et. Seq.) Where the product is used at a source in the same manner as normal consumer use	No	Language broad and not definitive. Need more specific activity description
27	Vacuum cleaning systems where the system is used exclusively for industrial or commercial purposes	Yes	AACR18-2-101.57 (j)
28	Building maintenance and janitorial activities	Yes	AACR18-2-101.57 (j)
29	Landscaping and site housekeeping equipment	Yes	AACR18-2-101.57 (j)

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
30	Fugitive emissions from small-scale landscaping activities	Yes	AACR18-2-101.57 (j) (provided reasonable control practices are employed)
31	Use of pesticides, fumigants, and herbicides	No	AACR18-2-730
32	Groundskeeping activities and products	Yes	AACR18-2-101.57 (j)
33	Firefighting activities and training conducted at the source in preparation for fighting fires	No	AACR18-2-602
34	Open burning activities	No	AACR18-2-602
35	Flares used to indicate danger	Yes	AACR18-2-101.57 (j)
36	Activities associated with construction, repair, or maintenance of roads or other paved or open areas, including operation of street sweepers, vacuum trucks, spray trucks and other vehicles related o the control of fugitive emissions of such roads or other areas	No	Article 6
37	Unpaved public and private roadways, except for haul roads located within a stationary source site boundary (pertains to regularly trafficked roadways, will vary according to facility)	No	Article 6
38	Road and lot paving operations at commercial and industrial facilities	No	Article 6
39	Sanding of streets and roads to abate traffic hazards caused by ice and snow	Yes	AACR18-2-101.57 (j)
40	Street and parking lot striping	Yes	AACR18-2-101.57 (j)
41	Fugitive dust emissions from the operation of a passenger automobile, station wagon, pickup truck, or van at a stationary source	Yes	AACR18-2-101.57 (j)
42	Shoveling to and from belt conveyors and drop boxes	No	Article 6
43	Air lance operation	No	Part of Isa Furnace
44	Mechanized or manual cleanup and haulage operation	No	Article 6
45	Concentrate reclamation	No	Article 6
46	Waster concrete reclamation	No	Article 6
47	RR Track Maintenance	No	Article 6
48	Portable waterfield maintenance	Yes	AACR18-2-101.57 (j)
49	Drilling and well development	No	Article 6

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
50	Salvage operations	Yes	AACR18-2-101.57 (j)
51	Cleanup of ditches	No	Article 6
52	Stormwater drainage control	Yes	AACR18-2-101.57 (j)
53	Cleanout of water collection sump	Yes	AACR18-2-101.57 (j)
54	Cleanup of railcars and clogged chutes	No	Article 6
55	Delumper cleanout	No	Article 6
56	Manual cleanup around conveyor belts and chutes	No	Article 6
57	Facilities used for preparing food or beverages primarily for consumption at the source	Yes	Article 6
58	Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning and finishing	Yes	AACR18-2-101.57 (j)
59	Construction and disturbance of surface areas for purposes of land development	No	Article 6
60	Activities at a source associated with the maintenance, repair or dismantlement of an emission unit or other equipment installed at the source, including preparation for maintenance, repair or dismantlement and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding and cutting, and purging of a vessel prior to startup; also includes maintenance, repair or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute an emission unit	No	Miscellaneous applicable requirements
61	Containers, reservoirs, or tanks used exclusively in dipping operations to coat objects with oils, waxes, or greases	Yes	AACR18-2-101.57 (j)
62	Activities connected with industrial hygiene services	Yes	AACR18-2-101.57 (j)
63	Manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding or turning and associated venting hoods	Yes	AACR18-2-101.57 (j)
64	Individual sampling points, analyzers, and process instrumentation, whose operation may result in emissions	No	Miscellaneous applicable requirements
65	Individual features of an emissions unit, such as each burner and sootblower in a boiler	No	Miscellaneous applicable requirements

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
66	Individual equipment that is transportable or activities within a facility established for testing for purposes of research or certification	No	Miscellaneous applicable requirements
67	Individual flanges, valves, pump seals, pressure relief valves and other individual components that have the potential for leaks	No	Miscellaneous applicable requirements
68	Brazing, soldering, or welding operations and associated venting hoods	Yes	AACR18-2-101.57 (j)
69	Battery recharging areas	Yes	AACR18-2-101.57 (j)
70	Aerosol can usage	Yes	AACR18-2-101.57 (j)
71	Plastic pipe or liner welding	Yes	AACR18-2-101.57 (j)
72	Acetylene, butane, and propane torches	Yes	AACR18-2-101.57(j)
73	Architectural painting and associated surface preparation for maintenance purposes at industrial facilities	No	AAC R18-2-727
74	Steam vents, condenser vents, and boiler blowdown	No	Miscellaneous applicable requirements
75	Equipment used exclusively for steam cleaning	Yes	AACR18-2-101.57(j)
76	Blast cleaning equipment using a suspension of abrasive in water or air and any exhaust system or collector serving them exclusively	No	AACR18-2-726
77	Surface impoundments, such as cooling ponds, evaporation ponds, settling ponds, and storm water ponds	Yes	AACR18-2-101.57(j)
78	Pump/motor oil reservoirs such as gear box lubrication	Yes	AACR18-2-101.57 (j)
79	Transformer vents	Yes	AACR18-2-101.57 (j)
80	Lubricating system reservoirs	Yes	AACR18-2-101.57 (j)
81	Hydraulic system reservoirs	Yes	AACR18-2-101.57 (j)
82	Adhesive use which is not related to production	Yes	AACR18-2-101.57 (j)
83	Caulking operations which are not part of a production process	Yes	AACR18-2-101.57 (j)
84	Emergency vents	No	Miscellaneous applicable requirements
85	Electric motors	Yes	AACR18-2-101.57 (j)
86	Cathodic protection systems	Yes	AACR18-2-101.57 (j)

S. No.	INSIGNIFICANT ACTIVITY NAME	Yes/No	Reason
87	High voltage induced corona	Yes	AACR18-2-101.57 (j)
88	Production of hot/chilled water for on-site use not related to any industrial process	No	Miscellaneous applicable requirements
89	Safety devices, such as fire extinguishers, if associated with a permitted emission source, but not including sources or continuous emissions	Yes	AACR18-2-101.57 (j)
90	CFC recovery equipment	No	40 CFR Part 82
91	Soil gas sampling	Yes	AACR18-2-101.57 (j)
92	Filter draining	Yes	AACR18-2-101.57 (j)
93	General vehicle maintenance and servicing activities at the source	Yes	AACR18-2-101.57 (j)
94	Station transformers	Yes	AACR18-2-101.57 (j)
95	Circuit breakers	Yes	AACR18-2-101.57 (j)
96	Gas vent valve (A gas vent valve is an atmospheric vent, necessary as a safety precaution, anytime that maintenance is performed on a natural gas line)	Yes	AACR18-2-101.57 (j)
97	Storage cabinets for flammable materials	Yes	AACR18-2-101.57 (j)
98	Fugitive emissions from landfill operations	No	Article 6
99	Oxygen plant vents	Yes	AACR18-2-101.57 (j)